



Mercedes-Benz



Factory Approved Service Products

October 2000

Mercedes-Benz USA recommends the use of Mercedes-Benz original parts, replacement parts, accessories as well as factory approved service products explicitly approved by us for your vehicle model.

We have subjected these parts, accessories and service products to special tests in which their reliability, safety and their special suitability for Mercedes-Benz vehicles have been verified.

Mercedes-Benz original parts, replacement parts, accessories and factory approved service products approved by us are available at your authorized Mercedes-Benz Center.

APPROVED ENGINE OILS

FOR VEHICLES WITHOUT FLEXIBLE SERVICE SYSTEM

IMPORTANT: Engine oils are labeled on the container with various ACEA (Association des Constructeurs Européens d'Automobiles) and/or API (American Petroleum Institute) designations of quality. Mercedes-Benz recommends the use of MB approved engine oils listed in the Mercedes-Benz oil specification sheet 229.1 or 229.3 which also meet ACEA and/or API classifications listed on the chart below. If a MB approved or ACEA quality engine oil is not available, then an API quality engine oil meeting the below listed API classification can be used. Only engine oils (including synthetic) with any of the following classification grades, or combinations thereof, are approved.

Engine	MB Sheet	ACEA Classification ¹⁾	API Classification ¹⁾
Gasoline	229.1	A2	SH
	229.3	A3	SJ
Diesel	229.1	B2	CF-4
	229.3	B3	CG-4
		B4	

Always refer to the viscosity chart for the proper viscosity grade based on ambient temperature. Note: This chart supersedes ALL previously published viscosity charts. For additional information please refer to the Operator's Manual.

1) only if MB sheet 229.1 or 229.3 is not available

FOR VEHICLES WITH FLEXIBLE SERVICE SYSTEM

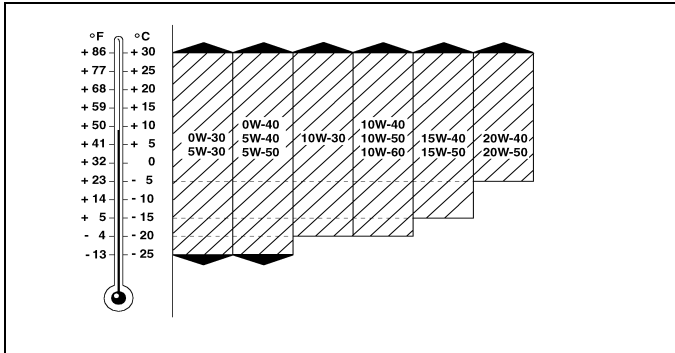
Mercedes-Benz recommends only the use of MB approved synthetic motor oil for all vehicles equipped with the Flexible Service System (FSS) as of Model Year 1998.

MB Approved Synthetic Engine oil	MB Sheet
Mobil 1 Tri-Synthetic Formula 15W-50	229.1
Mobil 1 Tri-Synthetic Formula 0W-40	229.1
Valvoline SynPower Full Synthetic Motor Oil 5W-40	229.1
Castrol Syntec 5W-50	229.1
Castrol Syntec 10W-40	229.1
Castrol TXT Softec Plus 5W-30	229.3
Shell Helix Ultra 5W-30	229.3
Shell Helix Ultra 5W-40	229.3

Conventional petroleum based oils are not recommended for vehicles equipped with the Flexible Service System but may be used on older vehicles.

VISCOSITY GRADES FOR MOTOR OILS

Select oil viscosity according to the lowest air temperature expected before the next oil change using the chart below.



AUTOMATIC TRANSMISSION FLUID ¹⁾

Castrol Dextron-III/Mercon ATF F-30341

Castrol Transmax M-22257 / 22096

Chevron ATF Dextron III F-30108 / 30159

Citgo Multi-Purpose ATF D-21571

Exxon Superflo ATF Dextron III F-30111

Havoline ATF Mercon/Dextron-III F-30321

Texaco ATF Mercon/Dextron-III F-30321

Pennzoil ATF D-22413 / F-30110

Quaker State Dextron-III/Mercon F30161

Sunoco ATF Dextron-III/Mercon F-30176

Unocal Multi-Purpose ATF D-22413 / 22431

Valvoline ATF Type D

MB Automatic Transmission

Fluid

MB part no. 001 989 21 03 10

¹⁾ Please see your authorized Mercedes-Benz Center regarding applications.

MANUAL TRANSMISSION FLUID

For MB manual transmission

MB Manual

Transmission Fluid MB part no. 000 989 26 03

HYPOID GEAR OIL ¹⁾

For rear axle differential (for limited slip see below), and for refilling 4MATIC™ front differential.

MB Hypoid Gear Oil MB part no. 000 989 28 03

HYPOID GEAR OIL ¹⁾

For limited slip differential and rear axle with ASD, 4MATIC™

MB Hypoid Gear Oil MB part no. 001 989 17 03 10

HYPOID GEAR OIL ¹⁾

For initial (new) fill of 4MATIC™ front differential

MB Life-Long hypoid gear oil MB part no. 001 989 05 03

SUPERCHARGER OIL

MB Supercharger Oil MB Part no. 000 989 62 01

STEERING GEAR LUBRICANT - POWER STEERING

For M-Class and Model Year 2000 and newer S-Class and CL-Class

MB Power Steering Fluid MB Part no. 001 989 24 03 10

STEERING GEAR LUBRICANT - POWER STEERING

For all models except M-Class and Model Year 2000 and newer S-Class and CL-Class

MB Power Steering Fluid MB Part no. Q 1 46 0001

FLUID GREASE (NLGI Class 00)

For door lock pin and striker eye

Castrol CLS Grease

HIGH TEMPERATURE ROLLER BEARING GREASE (NLGI Class 2)

For front wheel bearings

MB High Temperature Antifricition Bearing Grease MB part no. 001 989 23 51 10

CHASSIS GREASE (NLGI Class 01)

For all greasing points except front wheel hubs

Shell Retinax C

LONG TERM LUBRICATING GREASE (NLGI Class 2)

For release bearing, release arm and splines for connecting linkage on level control valves

Molykote Longterm 2 Plus

MB Long Term Grease MB part no. 000 989 63 51

MULTI-PURPOSE GREASE (NLGI Class 2)

For all greasing points except front wheel

3752 Almaguard Vari-Purpose Lubricant

Castrol LM Grease

Exxon Multi-Purpose Grease

Renolit MP

Unocal MP Automotive Grease

¹⁾ Please see your authorized Mercedes-Benz Center regarding applications.

COMPLEX GREASE (NLGI Class 2)

For sliding blocks of sliding/pop-up roof

MB Lubrication Paste MB part no. 001 989 46 51

HYDRAULIC OIL

For hydraulic system, model 100 (600)

MB Hydraulic Oil MB part no. 100 890 00 11

HYDRAULIC OIL

For load leveling system, hydropneumatic suspension, hydraulic soft top, 4Matic™, ASD

MB Hydraulic Oil MB part no. 000 989 91 03 10

HYDRAULIC OIL

For tandem pumps with common oil reservoir for steering and level control in E-class, Model Year 1996 and newer.

MB Hydraulic Oil MB part no. 001 989 20 03 10

BRAKE FLUID (DOT 4 Plus)

MB Brake Fluid MB Part no.000 989 08 07 10
(0.75 liter container)

MB part no. 000 989 08 07 11
(5.0 liter container)

BRAKE PAD PASTE

MB Brake Pad Paste MB part no. 001 989 10 51

ACTIVE BODY CONTROL FLUID

For MY 2000 and newer S-Class and CL-Class

MB ABC Fluid MB part no. 001 989 24 03 10

ENGINE COOLING SYSTEM

MB Anti-Corrosion/Anti-Freeze MB part no. Q 1 03 0002

Caution! The use of aluminum components in M-B engines requires that anti-corrosive/anti-freeze specifically formulated to protect aluminum parts be used. Failure to use MB anti-corrosive/anti-freeze may result in a significantly shortened service life. While there may be a number of products available which will provide the required protection, all such products have not been tested for Mercedes-Benz vehicles. The above product is suitable for our engines and can be mixed with the original anti-corrosion/anti-freeze filled in at the factory.

COMPRESSOR OILS (R12)

Capella Oil WF 100

Suniso 5 GS

COMPRESSOR OIL (R134a)

MB compressor oil MB part no. Q 1 13 0001

WINDSHIELD WASHER CONCENTRATE

MB Summerwash Formula VR9422

MB part no. 001 986 44 71 10 (40 ml)

Suggested Mixing Ratio (1:100)

Ambient Temperature	MB Summerwash	Added to	Water	Solvent ¹⁾
Summer use (above 32° F)	40 ml	added to	1 Gallon	
Winter use (below 32° F)	40 ml	added to		1 Gallon

¹⁾ Pre-mixed windshield washer solvent (commercially available blue concentrate in 1 gallon container)

FUEL REQUIREMENTS

1. Gasoline Engines

Reformulated gasolines (RFG) and/or unleaded gasoline containing oxygenates such as Ethanol, TAME, ETBE, IPA, IBA, and TBA can be used provided that the ratio of any one of these oxygenates to gasoline does not exceed 10%. MTBE may be added up to 15%. The ratio of Methanol to gasoline must not exceed 3% plus co-solvents.

Mixtures of Ethanol and Methanol must not be used. Gasohol, which contains 10% Ethanol and 90% unleaded gasoline, can also be used. These blends must also meet all other fuel requirements such as resistance to spark knock, boiling range, vapor pressure, etc.

Gasoline Additives

A major concern among engine manufacturers is carbon build-up caused by gasoline. MERCEDES-BENZ recommends to use only quality gasoline containing additives that prevent the build up of carbon deposits.

After an extended period of using fuels without such additives, carbon deposits can build up, especially on the intake valves and in the combustion area, leading to engine performance problems such as:

- warm up hesitation,
- unstable idle,
- knocking /pinging,
- misfire,
- power loss.

DO NOT blend other fuel additives with the fuel. These additional additives only result in unnecessary cost and may be harmful to engine operation.

Damage or malfunction resulting from poor fuel quality or from blending additional fuel additives are not covered by the MERCEDES-BENZ Limited Warranty or by any pre-owned or Extended Limited warranties.

For model year 1986, all gasoline models except 190E 2.3 require premium unleaded gasoline. As of model year 1987, all gasoline engines require premium unleaded gasoline.

Use only premium unleaded gasoline meeting ASTM standard D439. The octane number posted at the pump must be at least **91 min.** In the U.S., this octane number is an average of the Research octane number (R) and the Motor octane number (M): $(R + M) / 2$. The octane number is also known as the Anti-Knock Index.

Caution! To maintain the engine's durability and performance, only premium unleaded gasoline is to be used. If premium unleaded is not available and low octane gasoline is used, follow these precautions:

- Partially fill the fuel tank with unleaded regular gasoline and fill up with premium unleaded as soon as possible.
- Avoid full throttle driving and abrupt acceleration.
- Do not exceed an engine speed of 2000 rpm if the vehicle has a light load (two occupants and no luggage for example).
- Do not exceed 2/3 of maximum accelerator pedal position if the vehicle is fully loaded or operating in mountainous terrain.

Model years 1975 - 1985 and model year 1986 190 E 2.3

Use unleaded regular gasoline meeting ASTM standard D439. The octane number posted at the pump must be at least **87 min.**

Model years 1972 - 1974

Used leaded or unleaded gasoline meeting ASTM standard D439. The octane number posted at the pump must be at least **87 min.** When only unleaded gasoline is being used, check the valve clearance on engines with mechanically adjustable valves at half the recommended interval.

Pre-model year 1972

Use premium unleaded gasoline meeting ASTM standard D439. The octane number posted at the pump must be at least **91 min.** Check the valve clearance at half the recommended interval.

2. Diesel Engines

Use only commercially available vehicular diesel fuel number 2 or number 1 (ASTM D975 Number 2-D or Number 1-D).

For information on cold weather operation, refer to the vehicle Operator's Manual or Service Information MBNA 00/007(11-82).

Distributor in the United States:

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Technical Information

- 2000 Mercedes-Benz USA, LLC

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